REMARKS/ARGMENT

The Office Action

Claims 1-4, 7-12, 15-17 and 19 have been rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,614,799 to Gummalla, et al. Claims 5, 6, 13, 14 and 18 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Gummalla in view of U.S. Patent No. 6,215,792 to Abi-Nassif.

Status of the Claims

Claims 1-19 remain pending in this action. Claims 1, 2, 4, 7, 10, 12 and 17 have been amended to more clearly define the invention. Support for the claim amendments may be found throughout the specification and in the drawings.

Claims 1-19 are Patentably Distinguishable over the Cited Art

The present invention provides a method and system for data collision resolution wherein the same back-off window is sent to a plurality of remote users and is recalculated to maintain a constant collision rate and thereby increase throughput. The collision rate of the network is estimated in the present invention by detecting collisions and reservation slots in the size of the back-off window and is adjusted to maintain a collision rate of approximately 1-2/e.

Each of the independent claims (1, 10 and 17) includes sending the same back-off window to each of a plurality of users in a shared network. This means that every user will have the same chance of obtaining network resources regardless of how many times the user's data has previously collided. FCR thus shares the network resources in a fair way and, at the same time, avoids the capture affect found in prior art algorithms, such as BEB.

FIG. 1 shows a wireless internet access system 10 that includes an axis point 12 in communication with a plurality of devices 14. A communication link 16 couples the devices 16 to the axis point 12. A collision resolution device 30 determines whether a collision has occurred and is responsible for calculating back-off windows. The resolution device 30 sends the back-off windows through the axis point 12, and the axis point 12 sends the back-off windows to all of the remote devices 14 over the link 16.

5

In contrast, although Gummalla calculates back-off windows, it does not send the same back-off window to each of the users In the network as in the present invention.

Gummalla discloses a technique for dynamically adjusting modem back-off parameters in a cable modem network. And as noted in the background section of Gummalla (column 7, lines 41-56):

> There is no single, fixed back-off window value that works well for all upstream contention load scenarios. It is desirable, therefore, for the CMTS to incorporate an intelligent technique to estimate how many modems are currently involved in the collision resolution process, and to dynamically adjust the back-off window parameters (in the channel MAPs) accordingly.

Thus, Gummalla teaches that "[e]ach modem chooses its back-off value from a window of back-off parameters, specified by the CMTS. . . . . Because the number of cable modems associated with a particular cable channel may vary considerably, each cable channel[i] has its own associated BS[i} and BE[i} parameters." (Col. 11, lines 4-12.) As such, Gummalla fails to teach or suggest the feature of sending the same back-off window to each of the plurality of users in the network

Accordingly, Gummalla fails to teach or suggest the features of independent claims 1, 10, and 17 and thus does not anticipate the claimed invention for at least the above reasons. As such, claim 1 and claims 2-9, which depend therefrom, claim 10 and claims 1-16, which depend therefrom, and claim 17 and claims 18 and 19, which depend therefrom, are patentably distinguishable over the cited art.

6

CONCLUSION

For the reasons detailed above, it is respectfully submitted all claims remaining in the application (Claims 1-19) are now in condition for allowance. The foregoing comments do not require unnecessary additional search or examination.

In the event the Examiner considers personal contact advantageous to the disposition of this case, he/she is hereby authorized to telephone John S. Zanghi, at (216) 861-5582.

Respectfully submitted,

FAY, SHARPE, FAGAN,
MINNICH & McKEE, LLP

_1/18/06_
Date

John S. Zanghi
Reg. No. 48,843
1100 Superior Avenue
Seventh Floor
Cleveland, Ohio 44114-2579
216-861-5582

CERTIFICATE OF MAILING OR TRANSMISSION

Under 37 C.F.R. § 1.8, I certify that this Amendment is being

☐   deposited with the United States Postal Service as First Class mail, addressed to Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date indicated below.

☒   transmitted via facsimile in accordance with 37 C.F.R. § 1.8 on the date indicated below.

☐   deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 C.F.R. 1.10, addressed to Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date indicated below.

Express Mail Label No.:	Signature
	Elaine M. Checovich
Date	**Printed Name**
_1-18-06_	Elaine M. Checovich

N:\LUTZ\200443\US\emc0003835V001.doc

7